AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (original): A method for noise variance estimation of a detected signal, the method comprising:

receiving a signal and producing therefrom in a detector a detected signal;

producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 2 (currently amended): The method of ~~claim 1~~ claim 1, wherein the step of producing the second noise variance signal comprises applying ~~to the first noise variance signal~~ a function ~~substantially~~ equal to the detector's transfer function to the first noise variance signal.

Claim 3 (currently amended): The method of claim 1, ~~2 or 3~~ wherein the step of producing the first noise variance signal comprises deriving the first noise variance signal from a midamble portion of the received signal.

Claim 4 (currently amended): The method of claim 1, ~~2 or 3~~ further comprising:

producing from the second noise variance signal and an estimate of total power at the detector output ~~an SIR~~ a signal-to-interference ratio (SIR) signal representative of SIR in the received signal.

Claim 5 (currently amended): The method of ~~any one of claims 1-4~~ claim 1, wherein the detector is a CDMA multi-user detector.

Claim 6 (currently amended): The method of ~~any one of claims 1-4~~ claim 1, wherein the detector is a CDMA single-user detector.

Claim 7 (currently amended): The method of ~~any one of claims 1-4~~ claim 1, wherein the detector comprises a CDMA RAKE receiver.

Claim 8 (currently amended): The method of ~~any one of claims 1-7~~ claim 1, wherein the received signal is a wireless signal.

Claim 9 (currently amended): The method of ~~claim 8~~ claim 8, wherein the wireless signal is a UMTS air interface signal.

Claim 10 (currently amended): ~~An arrangement for~~ A user equipment capable of noise variance estimation of a detected signal, the ~~arrangement~~ user equipment comprising:

a detector for receiving a signal and detecting therein a detected signal;

first noise variance [[means]] logic for producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

second noise variance [[means]] logic for producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 11 (currently amended): The ~~arrangement of claim 10~~ user equipment of claim 10, wherein the second noise variance [[means]] logic is arranged to apply ~~to the first noise variance signal~~ a function ~~substantially~~ equal to the detector's transfer function to the first noise variance signal to produce the second noise variance signal.

Claim 12 (currently amended): The ~~arrangement of claim 10 or 11~~ user equipment of claim 10, wherein the first noise variance [[means]] logic is arranged to derive the first noise variance signal from a midamble portion of the received signal.

Claim 13 (currently amended): The ~~arrangement of claim 10, 11 or 12~~ <u>user equipment of claim 10</u>, further comprising:

[[SIR]] <u>signal-to-interference ratio (SIR)</u> estimation [[means]] <u>logic</u> for producing from <u>the</u> second noise variance signal and an estimate of total power at the detector output an SIR signal representative of SIR in the received signal.

Claim 14 (currently amended): The ~~arrangement of any one of claims 10-13~~ <u>user equipment of claim 10</u>, wherein the detector is a CDMA multi-user detector.

Claim 15 (currently amended): The ~~arrangement of any one of claims 10-13~~ <u>user equipment of claim 10</u>, wherein the detector is a CDMA single-user detector.

Claim 16 (currently amended): The ~~arrangement of any one of claims 10-13~~ <u>user equipment of claim 10</u>, wherein the detector comprises a CDMA RAKE receiver.

Claim 17 (canceled)

Claim 18 (currently amended): The ~~arrangement of claim 17~~ <u>user equipment of claim 10</u>, wherein the ~~wireless~~ <u>received</u> signal is a UMTS air interface signal.

Claim 19 (canceled)

Claim 20 (canceled)

Claim 21 (canceled)

Claim 22 (canceled)

Claim 23 (canceled)

Claim 24 (canceled)

Claim 25 (canceled)

Claim 26 (new): A base station capable of noise variance estimation of a detected signal, the base station:

a detector for receiving a signal and detecting therein a detected signal;

first noise variance logic for producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

second noise variance logic for producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 27 (new): The base station of claim 26, wherein the second noise variance logic is arranged to apply a function equal to the detector's transfer function to the first noise variance signal to produce the second noise variance signal.

Claim 28 (new): The base station of claim 26, wherein the first noise variance logic is arranged to derive the first noise variance signal from a midamble portion of the received signal.

Claim 29 (new): The base station of claim 26, further comprising:

SIR estimation logic for producing from second noise variance signal and an estimate of total power at the detector output an SIR signal representative of SIR in the received signal.

Claim 30 (new): The base station of claim 26, wherein the detector is a CDMA multi-user detector.

Claim 31 (new): The base station of claim 26, wherein the detector is a CDMA single-user detector.

Claim 32 (new): The base station of claim 26, wherein the detector comprises a CDMA RAKE receiver.

Claim 33 (new): The base station of claim 26, wherein the received signal is a UMTS air interface signal.

Claim 34 (new): A user equipment comprising:

    a memory;

    a processor coupled to the memory; and

    program code executable on the processor, the program code operable for:

    receiving a signal and producing therefrom in a detector a detected signal;

    producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

    producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 35 (new): A base station comprising:

    a memory;

    a processor coupled to the memory; and

    program code executable on the processor, the program code operable for:

    receiving a signal and producing therefrom in a detector a detected signal;

    producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 36 (new): A computer program product comprising program code for noise variance estimation of a detected signal, the computer program product comprising program code for:

receiving a signal and producing therefrom in a detector a detected signal;

producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 37 (new): The computer program product of claim 36, wherein the program code is further operable for:

applying a function equal to the detector's transfer function to the first noise variance signal.

Claim 38 (new): The computer program product of claim 36, wherein the program code is further operable for deriving the first noise variance signal from a midamble portion of the received signal.

Claim 39 (new): The computer program product of claim 36, wherein the program code is further operable for producing from the second noise variance signal and an estimate of total power at the detector output an SIR signal representative of SIR in the received signal.

Claim 40 (new): A communication system arranged to provide for noise variance estimation of a detected signal, the communication system comprising:

a detector for receiving a signal and detecting therein a detected signal;

first noise variance logic for producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

second noise variance logic for producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.

Claim 41 (new): An integrated circuit for receiving a signal and detecting therein a detected signal, the integrated circuit comprising:

first noise variance means for producing from the received signal a first noise variance signal representative of noise variance in the received signal; and

second noise variance means for producing from the detected signal and the first noise variance signal a second noise variance signal representative of noise variance estimation in the received signal.